

AMENDMENTS TO THE SPECIFICATION

Please replace the first full paragraph on page 3, with the following amended one:

An object of the present invention is achieved by a personal identification method (the first aspect of the present invention) through the measurement of subcutaneous bloodstream that comprises: (1) a step of expanding and irradiating a laser beam to a finger pad and focusing light reflected from a blood vessel layer under skin onto an image sensor as laser speckles by using an optical system; (2) a step of determining an amount representing the speed of time variation of the amount of received light at each pixel point in the laser speckles, for example, an average time variation rate or the reciprocal of the variation of the received light amount which is integrated in accordance with an exposure time of the image sensor, and setting the numerical value thus achieved as a two-dimensional map to thereby achieve a bloodstream map of the finger pad; and (3) a step of comparing a fingerprint pattern appearing as the bloodstream map with pre-registered personal data for identification, and a personal identification device executing the above-described steps.

Please replace the second full paragraph on page 3, with the following amended one:

Another object of the present invention is achieved by a personal identification method (the second aspect of the present invention) through the measurement of subcutaneous bloodstream that comprises: (1) a step of expanding and irradiating a laser beam to a finger pad and focusing light reflected from a blood vessel layer under skin onto an image sensor as laser speckles by using an optical system; (2) a step of determining an amount representing the speed of time variation of the amount of received light at each pixel point in the laser speckles, for

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example, a mean rate of time variation or the reciprocal of variation of the received light amount which is integrated in accordance with an exposure time of the image sensor, and setting the numerical value concerned as a two-dimensional map to achieve a bloodstream map of the finger pad; (3) a step of comparing/judging a fingerprint pattern appearing as the bloodstream map with personal data registered in advance; and (4) a step of determining a time variation of average bloodstream in the whole area or some area and comparing/judging the time variation with a predetermined reference, and a personal identification device executing the above-described steps.

Please replace the first full paragraph on page 6, with the following amended one:

The bloodstream map achieved in the present invention is original information achieved from a living body, and thus -counterfeiting is more difficult by using only a method of ~~claim 1~~ the first aspect of the present invention as compared with the conventional method/means of performing personal identification on the basis of only a fingerprint pattern. However, according to the ~~invention of claim 2~~ second aspect of the present invention, a step of determining the time variation of the average bloodstream in the whole area or some area and then comparing the time variation concerned with a predetermined reference and identifying a person is further provided as (4), and thus counterfeiting is more difficult. Furthermore, for example when a waveform is adopted as the time variation of the average bloodstream in some area, a reference of the waveform which is characteristic of a living body is determined in advance, and the comparison with the waveform thus determined and the identification are carried out, whereby it can be

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judged whether a person being examined is alive or dead. For example, waveform, amplitude, period or the like may be adopted as the reference.